



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------|------------------|
| 10/609,007 | 06/27/2003 | Steven D. Jacobs | 2002PI0431US01 | 8326 |
| 7590 09/07/2005 | | | EXAMINER | |
| Harold C. Moore Maginot, Moore & Bowman Bank One Center/Tower 111 Monument Circle, Suite 3000 Indianapolis, IN 46204-5115 | | | KRISHNAMURTHY, RAMESH | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3753 | |
| DATE MAILED: 09/07/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

C

| | | | |
|------------------------------|---|--------------------------------------|--|
| Office Action Summary | Application No. 10/609,007 | Applicant(s) JACOBS ET AL. | |
| | Examiner Ramesh Krishnamurthy | Art Unit 3753 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

This office action is responsive to communications filed 06/27/2005.

Claims 1 – 26 are pending.

1. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. Applicant's response filed 06/27/2005 indicates that the applicant has complied with conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e).
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3 – 5, 7 – 11, 13 – 15, 17 – 21 and 23 – 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Sharp et al. (US 5,304,093).

Sharp et al. discloses an arrangement for calibrating a Venturi valve (Col. 4, lines 59 – 65), with the valve having a variable shaft position and calibration information is stored in the form of a curve relating the position of the actuator to the flow rate, with the position of the actuator being proportional to the voltage provided thereto. Sharp et al. note that (Col. 4, lines 65 – 68) that the relationship between actuator position (and hence the voltage supplied thereto) and the flow is logarithmic and thus non-linear whereby voltage differences between first set of voltages is inherently greater than between a second set of voltages. The characteristic curve shown in Fig. 2 is taken here to be a representation of the tabular relationship between the actuator voltage and the flow. The arrangement of Sharp et al. necessarily operates between a minimum and maximum voltage (See Fig. 1).

The arrangement disclosed by Sharp et al. necessarily performs the method recited in claims 11, 13 – 15 and 17 – 20.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2, 6, 12, 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al. (US 5,304,093) as applied to claims 1, 3 – 5, 7 – 11, 13 – 15, 17 – 21 and 23 – 26 above, and further in view of EP 0 834 723.

The patent to Sharp et al. discloses the claimed invention with the exception of explicitly disclosing a verification procedure of the calibration.

The document EP '723 discloses (page 6, lines 55 – 58) that it is known in the art to verify the supplied calibration data for the purpose of obtaining a reliable calibration in actual use.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the arrangement of Sharp et al. a procedure to verify the calibration data for the purpose of obtaining a reliable calibration in actual use, as recognized in EP 0 834 723. It is noted that the steps of providing the plurality of test voltages in a particular sequence would necessarily form part of the verification procedure since the calibration data in Sharp et al exists in the form of a relationship between the actuator position i.e. voltage supplied and the resulting flow.

Response to Arguments

7. Applicant's arguments filed 06/27/2005 have been fully considered but they are not persuasive. Applicant is arguing that Sharp et al. fails to disclose a processing Circuit. In response, it is noted that Sharp et al. does indeed disclose a processing circuit (55). As for the arguments concerning claim 11, it is noted that since the calibration curve is being utilized to position the valve to produce a desired flow, such calibration necessarily refers to an in-situ calibration. As for arguments concerning claim 17, it is noted that the actuator in sharp et al. is responsive to voltage supplied to it and such a voltage is derived from the calibration curve, each applied voltage corresponding to a specific flow rate.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

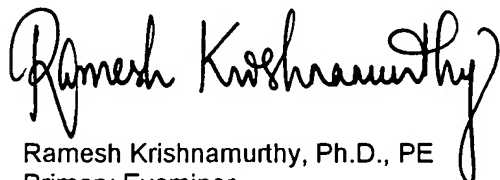
Art Unit: 3753

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (571) 272 – 4914. The examiner can normally be reached on Monday - Friday from 10:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Nicolas, can be reached on (571) 272 – 4931. The fax phone number for the organization where this application or proceeding is assigned is (571) 273 – 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Ramesh Krishnamurthy". The signature is fluid and cursive, with the first letter of each word being capitalized and prominent.

Ramesh Krishnamurthy, Ph.D., PE
Primary Examiner
Art Unit 3753